

Notice of Allowability

Application No.

10/808,635

Examiner

Terry L. Englund

Applicant(s)

TEO, SIEW SIONG

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amdts/Dwgs (Jan 22 & Apr 5, 2007) and Interviews (Apr 5 & 11, 2007).
2. ☒ The allowed claim(s) is/are 1-3, 5-15, and 17-20 (now renumbered as 1-18, respectively for printing purposes).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>20070405/20070411</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to the applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Final authorization for this examiner's amendment was left on a 6:47 PM telephone message by Alice Baum, representing the applicant's representative Brett A. Hertzberg (Reg. No. 42,660) on Apr 11, 2007 after a 2:50 PM telephone interview the same day.

The application has been amended as follows:

Claim 14, line 14: changed "signal combination" to --resistor--; and

Claim 15, line 1: added --comprises-- after "means".

Both changes correct inadvertent type oversights.

The change to claim 14 had been discussed during an interview on Apr 5, 2007, but was inadvertently left out of the Supplemental Amendment submitted that day. Without the change, "the signal combination means" would lack an antecedent basis. The change to claim 15 added in a term that was inadvertently dropped, from the previous version of the claim, when claim 15 was placed into the Supplemental Amendment and identified as "(Previously Presented)".

RESPONSE TO AMENDMENTS/DRAWINGS

When the amendments and drawings previously submitted on Jan 22, 2007 were initially reviewed and considered, it was noted that the amendment had not actually been signed, although the Fax Coversheet had been. A call to the applicant's representative Brett A. Hertzberg was made, and a message was left, at 12:10 PM on Feb 5, 2007 requesting a signed

Art Unit: 2816

copy. Although a signed copy was resubmitted on Feb 6th, for unknown reasons it was not apparently received/scanned in at the PTO, and the examiner was not aware of that copy.

However, after reviewing and considering the unsigned amendment, it was noted several concerns could be addressed/corrected by a Supplemental Amendment, which would also help ensure a signed amendment would be entered. Therefore, the applicant's representative was contacted on Apr 5, 2007 to discuss the following concerns and suggested changes: 1) claim 1: "at a first base" (line 4) was not necessary and could cause confusion with respect to the other nodes; the newly added phrase "the resistor" on line 9 should be --a resistor--and the original "a resistor" on line 15 should now be --the resistor--; the newly added "an output node of the error amplifier" (lines 9-10) and "an output from the band-gap cell" (line 14) needed to be related to one another to minimize confusion since they refer to the same voltage/node (e.g. see VGB in the applicant's Fig. 2); the newly added phrase "the band-gap circuit" on line 15 needed to be changed to --band-gap cell-- for consistent labeling; and the phrasing in lines 15-16 could be modified to remove "wherein the resistor circuit"; 2) claim 14: add --a-- prior to "first" on line 3 to improve word flow; "signal combination" on line 14 needed to be changed to --resistor-- to correspond to the amended change on line 13; and --means-- needed to be added after "cell" on line 16 for consistent labeling; 3) the limitations in dependent claim 16 are now also in amended independent claim 14, lines 7-9; and 4) claim 19: the inadvertently removed phrase "that has a second temperature profile" on lines 11-12 needed to be added back in to provide an antecedent basis for "the second temperature profile" in claim 20, and to minimize confusion with respect to claim 19's "a third temperature profile" (line 17) that implies a second temperature profile.

When considering/discussing the changes within claim 19, the applicant's representative also

Art Unit: 2816

noticed a typo with respect to “bang-gap” on lines 16-17. Acceptable wording/changes were agreed upon that would satisfactorily address/correct all the concerns identified above, and a Supplemental Amendment was submitted later that day.

Therefore, the amendments/drawings submitted on Jan 22, 2007, and the Supplemental Amendment submitted on Apr 5, 2007, were carefully reviewed and considered with the following results:

The Replacement Sheet for Fig. 6, and the amended paragraphs, and/or associated comments, overcame the objections to Figs. 5-6 as described on pages 2-3 of the previous Office Action. Therefore, those objections have been withdrawn.

The cancellation of claims 4 and 16, rendered their corresponding objections and rejections moot.

The new abstract overcame its objections, which have also been withdrawn.

The amended claims overcame all but one of their objections identified within the previous Office Action, or during the Apr 5th interview. Also, one claim had one term inadvertently dropped, creating a new objection. However, since these remaining two objections were addressed/corrected by the Examiner’s Amendment described above, all known objections to the claims have now been overcome, and these objections have all been withdrawn.

The amended claims also overcame the rejections of claims 1-3, 4-15, and 17-20 under 35 U.S.C. 112 as described on pages 4-5 of the previous Office Action, or discussed during the Apr 5th interview with respect to claims 1, 14, and 19-20. Therefore, all those claim rejections have been withdrawn.

Amended claims 1, 14, and 19 overcame all the prior art rejections described in the previous Office Action. Therefore, the rejections of claims 1-3, 6-15, and 17-20 under 35 U.S.C. 102(b), with respect to Carvajal et al., have now been withdrawn. Carvajal et al. does not show or disclose the resistor circuit between the output node and common node as now recited within claim 1; the resistor means between the first/second common nodes as now recited within claim 14; or a resistor between the first/second common nodes as now recited within claim 19.

Therefore, there is no known objection or rejection now remaining within the present application.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

None of the prior art references reviewed and considered shows or discloses an apparatus, or method, for providing a temperature compensated reference signal as now recited within independent apparatus claims 1 and 14, and within independent method claim 19. More specifically, none of the references clearly shows or discloses the combination related to: 1) a resistor circuit coupled between the output node of the error amplifier (i.e. output of the band-gap cell) and a common node, wherein a feedback circuit selectively activates a PTAT circuit to provide a second signal to the common node as recited within claim 1, upon which claims 2-3, and 5-13 depend; 2) a resistor means coupled between the first and second common nodes, and a sense means for selectively activating a PTAT means to provide a second signal to the first common node as recited within claim 14, upon which claims 15, and 17-18 depend; and 3) the coupling of a resistor between the first and second common nodes, and the coupling of a feedback signal to activate a PTAT circuit, wherein an output of the PTAT circuit is coupled to

Art Unit: 2816

the first common node as recited within claim 19, upon which claim 20 depends. Since there is no motivation to modify or combine any prior art reference(s) to ensure all the limitations within the claims, including any one of the above combinations, are met, the claims are deemed patentably distinct over the prior art of record.

Claims 1-3, 5-15, and 17-20 are allowed, and have been renumbered as claims 1-18, respectively for printing purposes. The renumbering takes into account the cancellation of claims 4 and 16.

PRIOR ART

Although Fig. 1 of Sutardja et al., cited in the previous Office Action, does show the basic circuit structure corresponding to the resistors R1-R4, comparator A1, and diodes Q1-Q2 shown in the applicant's own Fig. 2, and thus shows a resistor circuit/resistor means/resistor coupled between the two nodes as recited within the independent claims, the reference lacks at least the associated PTAT circuit/PTAT means also cited within each independent claim. Therefore, there is no motivation to modify or combine this reference to ensure the circuit/method would have all the limitations as now recited within the amended claims.

Any comments considered necessary by the applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication, or previous communications, from the examiner should be directed to Terry L. Englund whose telephone number is (571) 272-1743. The examiner can normally be reached Monday-Friday from 7 AM to 3 PM.

Art Unit: 2816

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal, can be reached on (571) 272-1769.

The new central official fax number is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1562.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

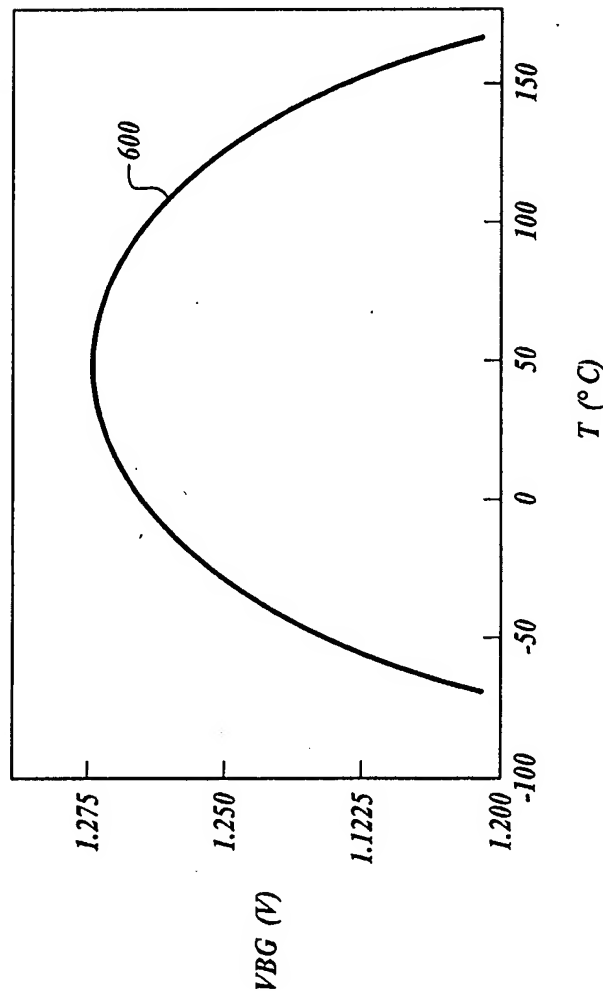
TLE

Terry L. Englund

12 April 2007

Kenneth B. Wells
Kenneth B. Wells
Primary Examiner
Art Unit 2816

Approved
4.11.07
TLE



(PRIOR ART)

FIGURE 6